

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-20 are presently pending in this application, Claims 1-4 having been amended by the present amendment.

In the outstanding Office Action, Claims 1-3 were rejected under 35 U.S.C. §103(a) as being unpatentable over Kubota et al. (U.S. Patent 5,807,440); Claims 1-8 and 11-17 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hiraishi et al. (U.S. Publication 2002/0027626) in view of Iijima (U.S. Patent 6,906,767) and in further view of Arai et al. (U.S. Patent 6,778,241); Claims 9 and 10 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hiraishi et al. in view of Iijima, Arai et al., and Kubota et al.; and Claims 18-20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hiraishi et al. in view of Iijima, Arai et al. and Gunn et al. (U.S. Patent 6,665,027).

Claims 1-4 have been amended herein, and these claim amendments are believed to be clearly supported by the original disclosure of the present application. Thus, no new matter is believed to be introduced. If, however, the Examiner disagrees, the Examiner is invited to telephone the undersigned who will be happy to work in a joint effort to derive a mutually satisfactory claim language.

Briefly recapitulating, Claim 1 as currently amended is directed to a semitransparent reflector including a multi-layered, biaxially-oriented film comprised of a base layer (A) and protective layers (B) and (C) provided on the base layer (A). The base layer (A) has flaky pores (D) and is comprised of a thermoplastic resin, a flaky inorganic fine powder and/or an organic filler, and the multi-layered, biaxially-oriented film satisfies the following optical characteristics (1) and (2): (1) $10 \% \leq T \leq 80 \%$, $20 \% \leq R \leq 90 \%$, $80 \% \leq (T + R) \leq 100 \%$ (2) $8 \% \leq (R - R_d) \leq 30 \%$, where T indicates the whole light transmittance (%) of the

reflector, R indicates the whole light reflectance (%) thereof, R_d indicates the whole light diffusion reflectance (%) thereof. By providing such a multi-layered, biaxially-oriented film, the semitransparent reflector of Claim 1 attains higher light transmittance and reflectance, and thereby achieves better visibility.

Hiraishi et al. is related to a laminated film. However, Hiraishi et al. fails to teach “a multi-layered, biaxially-oriented film ..., wherein ... the multi-layered, biaxially-oriented film satisfies the following optical characteristics (1) and (2): (1) $10 \% \leq T \leq 80 \%$, $20 \% \leq R \leq 90 \%$, $80 \% \leq (T + R) \leq 100 \%$ (2) $8 \% \leq (R - R_d) \leq 30 \%$, where T indicates the whole light transmittance (%) of the reflector, R indicates the whole light reflectance (%) thereof, R_d indicates the whole light diffusion reflectance (%) thereof” recited in Claim 1 as currently amended. Specifically, Hiraishi et al. discusses a laminated film produced by laminating an anisotropic light-scattering layer and a transparent resin layer by coextrusion molding method,¹ and states that during such a production process, the coextruded film may be subjected to an orientation treatment. With regard to this orientation treatment, the Office Action asserts that “[t]he reference explicitly discloses similar (overlapping) areal draw ratios and draw ratios in the machine direction to the transverse direction. Applicant has argued that Hiraishi only teaches monoaxial stretching and the draw treatment as being in the same direction as the monoaxial stretching however the specification clearly distinguishes between the two directions (see [0096]).” However, it is respectfully submitted that Hiraishi et al. in paragraph [0096] merely distinguishes between the draw (draft) treatment and the monoaxial stretching, and does not distinguish between the direction of the draw treatment and the direction of the monoaxial stretching. More specifically, Hiraishi et al. states in this paragraph that “the orientation treatment can be achieved by, for example, the method comprising coextruding the resins constituting the laminated film and giving a draft (or draw)

¹ See Hiraishi et al., paragraph [0093].

to form the film in the course of extrusion, the method comprising solidifying the laminated film which has been formed and monoaxially stretching the film.” That is, the Hiraishi et al. method conducts the draw (draft) treatment in the course of extrusion prior to solidification of the extruded composition, and after the solidification, performs the monoaxial stretching. In other words, Hiraishi et al. simply distinguishes the draw treatment from the monoaxial stretching based on the timing.²

Also, referring to a prior art, JP-A-4-314522, Hiraishi et al. states that “the anisotropic light-scattering material is produced by extruding a composition obtained by melt-kneading the transparent matrix resin and the transparent substance and cooling the molten resin which is extruded in the form of a sheet under a large draft applied in the direction of extrusion.”³ That is, the draw treatment can only be conducted in the direction of extrusion. Hiraishi et al. describes three examples of stretching methods in paragraph [0101], *i.e.*, pull stretching, inter-roll stretching and roll calendaring, and these stretching processes are conducted in the direction of extrusion (transportation). Also, according to Examples 1-3 of Hiraishi et al., the monoaxial stretching is in fact conducted in the same direction as the draw treatment. Hiraishi et al. emphasizes the advantages of its method by stating that “[b]y treating the film with the above process, the particles of the particulate dispersed phase can be oriented along draw direction or the stretching direction,”⁴ and that “[t]he preferred stretching technology includes the method of subjecting the laminated film (for example, a formed and cooled laminated film) to monoaxial stretching. Compared with the method of forming a film under draft, the aspect ratio of the dispersed phase can be easily increased by this stretching.”⁵ That is, Hiraishi et al. achieves a high aspect ratio of the dispersed phase by orienting the direction

² See also Hiraishi et al., paragraph [0028].

³ *Id.*, paragraph [0012].

⁴ *Id.*, paragraph [0096].

⁵ *Id.*, paragraph [0100].

of the longitudinal axis of particles contained in the dispersed phase to achieve,⁶ but such advantages are not obtained if the draw treatment is conducted in the direction of extrusion and then the monoaxial stretching is conducted in another direction (for example, perpendicular to the extrusion direction). In view of the above discussions, it is believed that Hiraishi et al. teaches away from employing a biaxially-oriented film as recited in Claim 1. For the foregoing reasons, the semitransparent reflector of Claim 1 is believed to be distinguishable from Hiraishi et al.

Kubota et al. is directed to a photovoltaic device, and Iijima, Arai et al. and Gunn et al. are relating to liquid crystal displays, but none of these references is believed to teach “a multi-layered, biaxially-oriented film ..., wherein ... the multi-layered, biaxially-oriented film satisfies the following optical characteristics (1) and (2): (1) $10 \% \leq T \leq 80 \%$, $20 \% \leq R \leq 90 \%$, $80 \% \leq (T + R) \leq 100 \%$ (2) $8 \% \leq (R - R_d) \leq 30 \%$, where T indicates the whole light transmittance (%) of the reflector, R indicates the whole light reflectance (%) thereof, R_d indicates the whole light diffusion reflectance (%) thereof” as recited in Claim 1. On the other hand, Kubota et al. simply describes a photovoltaic device provided with a diffuser layer for scattering and dispersing incident light, Iijima merely describes a liquid crystal display having a diffusion plate which effects forward scattering, Arai et al. only discusses a liquid crystal display element having a high-refractive-index transparent film and a low-refractive-index transparent film which are laminated one another and function as reflecting films, and Gunn et al. simply shows in Fig. 8 a liquid crystal display stack including a polarizer 102 having a transmission of 95%. Thus, the semitransparent reflector of Claim 1 is believed to be distinguishable from Kubota et al., Iijima, Arai et al. and Gunn et al.

⁶ See Hiraishi et al., paragraph [0062].

Because none of Hiraishi et al., Kubota et al., Iijima, Arai et al. and Gunn et al. discloses the multi-layered, biaxially-oriented film as recited in Claim 1, even the combined teachings of these cited references are not believed to render the structure recited in Claim 1 obvious.

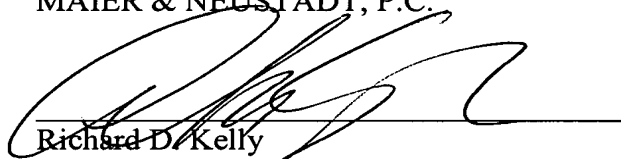
Likewise, independent Claims 2 and 3 recite “a multi-layered, biaxially-oriented film ..., wherein ... the multi-layered, biaxially-oriented film satisfies the following optical characteristics (1) and (2): (1) $20 \% \leq T \leq 70 \%$, $30 \% \leq R \leq 80 \%$, $90 \% \leq (T + R) \leq 100 \%$, (2) $10 \% \leq (R - R_d) \leq 25 \%$,” and “a multi-layered, biaxially-oriented film ..., wherein ... the multi-layered, biaxially-oriented film satisfies the following optical characteristics (1) and (2): (1) $25 \% \leq T \leq 55 \%$, $40 \% \leq R \leq 70 \%$, $95 \% \leq (T + R) \leq 100 \%$, (2) $10 \% \leq (R - R_d) \leq 20 \%$,” respectively. Accordingly, for substantially the same reasons as set forth above for Claim 1, Claims 2 and 3 are also believed to be distinguishable from Hiraishi et al. and Kubota et al., Iijima, Arai et al. and Gunn et al.

For the foregoing reasons, Claims 1-3 are believed to be allowable. Furthermore, since Claims 4-20 ultimately depend from Claim 1, substantially the same arguments set forth above also apply to these dependent claims. Hence, Claims 4-20 are believed to be allowable as well.

In view of the amendments and discussions presented above, Applicants respectfully submit that the present application is in condition for allowance, and an early action favorable to that effect is earnestly solicited.

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